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ABSTRACT

It has been hypothesized that personality needs have a significant impact upon eventual occupational placement. The Edwards Personal Preference Schedule (EPPS) was designed to provide researchers in Career development with a quick and convenient measure of a number of relatively independent personality variables, or needs. It gauges 15 such needs and provides measures of test consistency and profile stability. This study was designed to observe normative differences between groups previously given the EPPS (and reported in the research literature) and to ascertain if the EPPS normative group is representative of any population. Data were collected on previous studies, encompassing 24 male and 15 female groups, which reported means and standard deviations of sub-populations. Multiple t-tests were run through computer analysis. The results suggest that the representativeness of the test manual norm group and the sensitivity of the scales are questionable and that further research on the schedule is warranted. Scale sensitivity and differentiation are considered in more detailed in part II of the paper. Autonomy, for both men and women, appears to contribute little to differentiating among groups, and hence, any time a group is found to differ from the norm on this scale, they can be said to be really different. Problems related to such use of the EPPS and which require further research are raised. (Author/PR)

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THE EDWARDS PERSONAL PREFERENCE SCHEDULE

I. Normative and/or Non-Normative Aspects

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I. Normative and/or Non-Normative Aspects

A number of researchers in career development have turned their attention to the impact and importance personality needs have upon eventual occupational placement. People work to satisfy needs, and if this is so, occupational groups should have common need patterns. One instrument designed as a research and counseling instrument has been the Edwards Personal Preference Schedule (EPPS) which measures several relatively independent normal personality variables. The EPPS has been used a good deal to cite the differentiated need patterns among occupational groups. Yet, the EPPS has had little normative data accumulated, for example, in comparison to the Strong.

The Problem

This study was designed to observe normative differences among the EPPS and groups previously studied in the research data. The EPPS has had few normative comparisons to date, and none to the extent of this study. The study intends to raise the question, "Is the EPPS normative group representative of any population?" If great numbers of differences occur among the EPPS norm group and all other groups, this may well indicate that the normative data are non-representative of any population.

The Edwards Personal Preference Schedule

General Background. The EPPS is designed to provide a quick and convenient measure of a number of relatively independent personality needs. In addition to gauging fifteen such personality needs, the test also provides measures of test consistency and profile stability. The EPPS consists of 210 pairs of items in a forced-choiced format to be answered in a yes or no manner. Fifteen pairs of items are repeated to reveal a consistency score. The results of the EPPS present the relative strength of competing needs rather than the absolute strength of any one need. The EPPS is founded in the so-called "normal" personality rather than in the pathological personality. This becomes a distinct advantage of the EPPS since it permits a wider usage of the test.

Norms of the EPPS. The effective use of any test necessitates the inclusion of norms so that high and low scores of individuals or groups might be observed. The norms of the EPPS appear to have been substantiated through the research of other authors. Allen and Dallek (1957, p. 151) did not find any significant differences in the needs of their local sample and the standardization group, indicating that the norms of the EPPS overcame regional differences. Supporting the use of separate male and female norms, Satz and Allen (1961, p. 195) in a study of 157 males and 79 females at the University of Miami discovered "substantial sex variable differences in addition to population mean differences in the regional and normative groups." Separate norms must also be used for psychiatric patients (Gauron, 1965, pp. 194-196).

Intercorrelations of the EPPS Scales. The intercorrelations among the EPPS scales, showing dependence or independence of each of the variables, have received much attention from Allen (1957), who attempted initially to ascertain the extent to which the intercorrelations for a second college population would be similar to the intercorrelations in the test manual. Differences were attributed

to the size and heterogeneity of the two college populations. Affiliation and nurturance, order and endurance and order and deference were positively correlated, while deference and autonomy and intraception and succorance were negatively correlated.

In a follow-up study, Allen (1958, pp. 591-597) described the intercorrelations among the EPPS scales. The writer suggested the following patterns from the varous positive and negative correlations, i.e., the scales found in each pattern seemed to be related:

Pattern 1	Pattern 2
Aggression	Affiliation
Autonomy	Nurturance
Heterosexual	Order
Dominance	Abasement
Exhibition	Succorance
	Deference
	Intraception

Patterns 1 and 2 were not mutually exclusive but were clearly defined. Common to both sides were the needs of achievement, change and endurance. Pattern 1 variables assumed an "outgoingness" and social responsiveness. The need for aggression indicates an involvement with people that is without warmth and understanding. The Pattern 1 variables also expressed independence and extroversiveness.

Pattern 2 indicates respect and consideration for and personal dependency upon others. This pattern included affiliative needs or close interpersonal attachments in addition to a conformity with societal expectations. The need for intraception and nurturance reflected a need for such activities as analyzing the motives of oneself and others. An intrapunitiveness was present as evidenced by the need for abasement.

Method

Data were collected on previous studies which utilized the EPPS and reported means and standard deviations of sub-populations. The final number encompassed 24 male and 15 female groups. (See Appendix A). Multiple t-tests were run through computer analysis, since sufficient data were not present to resort to analysis of variance. Recognizing the ipsative nature of the EPPS, in other words, a change upon one scale forces change on another, the investigators utilized the one per cent level of significance.

Limitations of the Study

One should be aware of the following limitations of this study:

1. Colleges have different admissions and retention policies. Scores of college samples may simply reflect differences based upon these selective criteria.
2. Several of the reported studies used an age cutoff point, whereas others did not.
3. In at least one study, a low consistencyscore was used to exclude individuals. In addition, other studies did not even bother to include the consistency score.

4. In some cases we may be comparing groups that should not be compared, e.g., the neuropsychiatric group and the norm group.

Findings

In the comparison of the means of the various male groups, 10 of the 24 male groups had fewer overall significant differences than the norm group. The most representative group of all the remaining groups was Jackson's elementary teachers with only 37 significant differences. In contrast the EPPS norm group of males had 117 significant comparisons out of a possible 330. Thirty-five per cent of all comparisons of the male norm group, then, were significant at the .01 level. Scale sensitivity differed a great deal also in norm group comparisons, e.g., 14 of the 23 comparisons upon Autonomy were significant. (See Tables 1 and 2).

Similar results were observed in the comparisons of the female groups. Seven out of the fifteen female groups had fewer significant scores at the .01 level out of a possible 195 comparisons. Forty-one per cent of the comparisons of female groups were significant difference out of a possible 14 on Abasement while only 1 comparison was significant on the Autonomy scale.

Tables 3 and 4 make possible some comparisons of apparently similar groups by putting total number of differences for these relatively common groups in one column. This in turn allows ready identification of these groups. Even then it is evident that the like groups differ in comparisons among all groups. For example, among the male college samples, differences range from 81 to 142. The female college samples do not show these great differences. On the other hand, the female high school students have differences extending from 65 to 103. It is apparent then, that the EPPS is not consistently discriminating among like groups.

Conclusions

In conclusion, one could simply raise some question about the representativeness of the test manual norm group of the EPPS and also the sensitivity of several of its scales.

II. Scale Sensitivity and Differentiation

As Pietrofesa pointed out in Part I, "Normative and/or Non-Normative Aspects," the various scales of the Edwards Personal Preference Schedule did not contribute equally to differentiating the norm group from other populations. This will be considered further in this paper and then some consideration will be given to the sensitivity of the scales, or the relative contributions of the scales, in differentiating among all populations. Finally, some points raised by both papers will be mentioned.

Noted earlier was the fact that when the Edwards male College Norm Group was compared with all other studies, there were 117 statistically significant differences, at the one per cent level. Reference to Table 1 indicates that about 30 percent of these differences were contributed by just three scales,

Endurance, Achievement and Abasement. Parenthetically it should be noted that computers that accept language instructions cannot distinguish between end, and End. as an abbreviation for Endurance. Hence, Edwards' END appears here as DUR.

Of these three scales, only one, Abasement is associated with one of the Allen (1968) patterns, (Pattern II). Achievement and Endurance were common to both his patterns. In Table 5 can be found (column 1) the rank order of the scales in terms of number of differences form the norm group. At the bottom of the listing is Autonomy. With 23 comparisons possible, there was only one group which differed from the norm group on this scale.

With the females, the situation is somewhat different. Again, three scales accounted for somewhat more than 30 percent of the significant differences but Abasement is the only scale contributing many differences with both sexes. All of the three highly contributuing females scales, Abasement, Affiliation and Deference, are found in Allen's Pattern II. Common to both sexes is the minor contribution of Autonomy, again with only one significant difference. In Table 6 are the rank order contribution of differences for females. A Comparison of the first columns of Tables 5 and 6 indicates quite clearly that

1. autonomy contributes little for both sexes,
2. abasement contributes many differences,
3. several scales contribute quite differently by sex, particularly change and intraception.

Turning to the differentiation among all studies, rather than from the Edwards norm group, further differences are found. In Tables 5 and 6 are the data to which reference will now be made. In the third column of these tables are the total number of differences, by scale, among all the groups. For men, the total of such differences is 1,370. Just about ten percent of these differences are contributed by Dominance. The others of the top three contributions based upon thirty percent are Intraception and Abasement. Only the latter, ABA, was one of the top three in distinguishing the norm group from all others. Endurance, the leading scale in the number of differences from the norm group, is among the middle of the listing in differences among all groups. Said differently, the norm group differs most often from the other groups on Endurance, while all the groups differ most among themselves on Dominance. In terms of rank order of contribution, Endurance and Dominance reversed their relative positions.

Autonomy was consistent, remaining at the bottom of the list. The 28 significant differences on this scale are misleading, however, for 22 of these differences were contributed by one group.

With the female groups, there is greater consistency whether comparison are from the norm group or among all groups. Abasement, Deference and Order are the three leading contributors of differences among all the groups. Of these, the first two were found among the top contributors of differences from the norm group. Order and affiliation approximately reversed positions, when changing from comparisons with the norm to among all groups. Unlike the male population, the scales with the greatest number of differences for females, whether comparisons are from the norm group or among all groups, are in Allen's Pattern II.

The last four columns of Tables 5 and 6 are included as an indicator of dispersion of differences among groups, as well as the direction of these differences, to what extent are the number of differences attributable to a few extremely divergent groups. Achievement and Deference for the men (Table 5), while both having 118 differences, did not accumulate these differences in

the same way. Approximately half of the differences on Deference can be attributed to four groups, each of which was significantly higher than at least 14 other groups on this scale.

In connection with this, it should be pointed out that the Edwards College Norm Group contributed three of the entries to this portion of Tables 5 and 6. Of these, significance may attach to only one, Endurance for the men, where the norm group is lower than at least 14 other studies. The eight or more differences for the females on Abasement and Affiliation are in both directions and hence may only be reflecting differences of other groups from the mean.

At this point customarily one should turn to a section labeled "Conclusions." Here, because of the mass and confusion of the data, it must be in the singular and followed by some questions.

First, the conclusion: Autonomy, for both men and women contributes little to differentiating among groups, and hence, any time a group is found to differ from the norm on this scale, they can be said to be really different.

Now the questions.

Would the finding that a college population differs from the Edwards college norm group mean anything? More specifically, would differences for men on Endurance have any significance?

The existence of separate norms by sex indicate that Edwards found significant differences between men and women. The data here suggest that there are also differences by sex in the way groups differ from the normative population. Are the norm groups comparable samples by sex from a common population or did some sort of bias enter into the original sampling? Or do men and women differ in the way they differ?

The differences between men and women on the contributions of the various scales raise, or at least suggest, a question about Allen's findings on patterns, particularly since his population was one of the groups reported here. At the very least, one could question whether his patterns are applicable to both men and women.

While the data call into question the Edwards college population as a normative group, an even larger question is raised: can there be a college norm group without use of a random sample stratified on more variables than has been customary? Curricular major and geographical region seem to be factors.

Age may well be another factor compounding the problem, and a factor to be controlled in the consideration of a normative population. Although not considered specifically in this paper, age seems to be inversely related to the number of differences between a population and the other groups. This is suggested by the decrease in the number of differences as one monves from high school students to college students to counselors. What is the relationship of age to scores on the Edwards PPS? Or is there another factor operating that appears to look like growth?

Finally, we would note that the Edwards Personal Preference Schedule has been widely used as a research instrument. Perhaps, however, the Edwards is an instrument on which more research needs to be done?

References

Allen, R. M. "An Analysis of Edwards Personal Preference Schedule Intercorrelations for a Local College Population." Journal of Educational Research, 1958, 51, 591-597.

Allen, R. M. "Edwards Personal Preference Schedule Intercorrelations of Two Groups." The Psychological Record, 1957, 7, 87.

Allen, R. M. and J. I. Dallek, "A Normative Study of the Edwards' Personal Preference Schedule." Journal of Psychology, 1957, 43, 151-154.

Edwards, A. L. Edwards Personal Preference Schedule. New York: The Psychological Corporation, 1959.

Gauron, E. "Changes in Edwards Personal Preference Schedule Needs with Age and Psychiatric Status." Journal of Clinical Psychology, 1965, 21, 194-196.

Satz, P. and R. M. Allen. "Study of the Edwards Personal Preference Schedule: Regional Normative Approach." Journal of Social Psychology, 1961, 53, 195-198.

TABLE 1

MALE GROUP DIFFERENCES BY SCALE WITH
THE EPPS NORM GROUP

	ACH	DEF	ORD	EXH	AUT	AFF	INT	SUC	DOM	ABA	NUR	CHNG	DUR	HET	AGG	Total
1	*		*			*	*	*					*	*		7
2		*	*											*		3
3	*		*				*	*	*		*	*	*			8
4	*													*		2
5		*	*	*	*	*			*	*			*	*		9
6	*		*			*		*			*		*		*	7
7		*	*					*					*	*		5
8		*														1
9									*	*			*	*		4
10	*	*	*	*			*	*	*	*	*	*	*	*		12
11	*	*	*	*					*	*	*		*	*		9
12	*					*	*			*						4
13		*	*	*					*	*			*			6
14													*			1
15		*								*			*	*		4
16						*	*	*							*	4
17																Norm
18	----------DELETE----------															
19	*			*			*			*		*	*		*	7
20							*							*		2
21	*					*	*		*	*					*	6
22	*					*			*	*	*		*		*	7
23	*					*		*				*	*			5
24		*					*			*					*	4
Total	11	9	9	5	1	8	9	7	8	11	5	4	14	10	6	117

TABLE 2

FEMALE GROUP DIFFERENCES BY SCALE WITH
THE EPPS NORM GROUP

	ACH	DEF	ORD	EXH	AUT	AFF	INT	SUC	DOM	ABA	NUR	CHG	DUR	HET	AGG	Total
1	*	*	*	*	*	*		*	*				*	*		10
2		*	*									*	*	*		5
3		*	*	*					*				*	*		6
4										*		*		*		3
5		*	*	*		*	*		*	*	*	*	*	*		11
6									*	*	*				*	4
7	*					*				*				*		4
8			*			*				*		*				4
9	*	*	*			*	*	*		*			*			8
10	----------															Norm
11	----------						DELETE									
12		*		*		*	*		*		*	*	*		*	9
13						*	*	*		*						4
14	*	*	*			*			*	*		*			*	8
15		*						*		*		*				4
	4	8	7	4	1	8	4	4	6	9	3	7	6	6	3	80

TABLE 3

TOTAL DIFFERENCES BY SCALE AMONG ALL MALE GROUPS

	ACH	DEP	ORD	EXH	AUT	AFF	INT	SUC	DOM	ABA	NUR	CHNG	DUR	HET	AGG	Total	College Students	Counselors	H.S. Students	N.P. Patients
1	19	7	14	2	1	14	20	9	10	7	6	6	16	10	2	143				
2	5	11	7	5	3	3	10	1	8	7	4	4	4	10	1	83				
3	18	7	10	1	1	2	13	5	18	8	15	10	19	4	6	137				
4	11	10	8	5	3	4	7	3	9	10	4	5	6	9	8	102				
5	8	14	9	19	22	4	7	2	17	12	5	1	10	9	3	142	142			
6	12	14	11	8	4	10	10	6	9	9	10	4	9	9	9	134	134			
7	8	14	12	5	1	4	10	5	9	9	3	3	8	10	2	103				
8	4	8	1	1	1	1	2	0	6	5	1	1	2	2	0	35				
9	9	8	13	3	1	6	9	6	17	14	4	6	7	10	5	118	118		118	
10	10	13	13	6	1	7	11	14	19	16	17	9	10	17	8	171				171
11	10	14	15	7	1	3	9	2	19	16	18	3	13	19	8	157				157
12	9	9	13	3	1	6	11	4	9	11	3	2	8	13	8	110	110			
13	10	14	16	10	3	3	7	2	15	12	7	1	14	6	8	128				
14	8	7	7	3	1	3	7	3	10	8	2	1	6	8	7	81	81			
15	10	13	7	8	1	7	10	5	10	10	8	5	9	10	7	120	120			
16	3	0	8	1	1	20	17	15	7	8	1	8	6	2	10	107		107		
17	1	9	9	5	1	8	9	7	8	11	5	4	14	10	6	117				
18	---------- DELETED ----------																			
19	16	10	9	16	1	10	19	10	18	14	5	18	9	9	10	174				74
20	5	8	5	1	1	3	15	1	9	8	4	3	4	5	3	75		75		
21	21	11	12	7	1	7	14	11	17	15	3	8	10	12	15	164				164
22	13	9	10	4	1	7	8	4	18	17	9	3	5	6	12	126	126			
23	13	11	7	4	3	19	9	5	9	8	3	9	7	10	7	124	124			
24	3	13	3	1	1	3	15	2	7	12	3	0	4	2	13	82		82		

TABLE 4

TOTAL DIFFERENCES BY SCALE
AMONG ALL FEMALE GROUPS

	ACH	DEF	ORD	EXH	AUT	AFF	INT	SUC	DOM	ABA	NUR	CHG	DUR	HET	AGG	Total	College Students	Counselors	H.S. Students	Ed Students
1	6	8	11	13	12	5	3	8	6	8	4	7	8	8	4	111				
2	2	9	6	5	4	5	3	2	1	9	0	8	8	7	1	70				
3	5	10	11	6	4	7	3	4	7	11	2	6	8	8	3	95				
4	5	7	5	3	1	2	3	5	4	8	3	6	4	8	1	65	65		65	
5	2	9	13	8	7	4	8	4	11	8	10	8	8	9	4	113				
6	3	2	4	1	3	7	3	2	5	8	9	1	6	5	6	65	65			
7	6	5	5	2	3	5	4	1	6	9	4	6	4	8	0	68	68			
8	2	5	5	5	3	5	4	3	6	8	4	6	6	5	3	70	70			70
9	6	7	5	5	3	6	8	6	6	7	4	5	9	5	4	86	86			86
10	5	7	7	4	1	8	4	4	6	9	3	7	6	6	3	80				
11	----------DELETED----------																			
12	10	5	5	7	4	11	9	5	7	6	8	7	8	6	5	103			103	
13	2	6	4	5	7	8	12	6	6	9	2	5	2	5	1	80		80		
14	10	8	12	5	4	5	3	3	6	8	5	6	7	6	7	95			95	
15	0	6	3	1	1	2	4	11	1	9	4	8	4	1	0	55		55		

TABLE 5

DIFFERENCES BY SCALE (MALE)

	Rank order of # of signif. differences				Number of studies with 14 or more significant differences (01 per cent) and direction.			
Scale	From Norm	Among All	Sig. diffs. Total	*%	Total	Higher	Lower	Both
ACH	2.5	4.5	118	23	4	2	1	1
DEF	7	4.5	118	23	5	4	-	1
ORD	7	6	110	22	3	3	-	-
EXH	12.5	12	63	12	2	1	1	-
AUT	15	15	28	06	1	-	1	-
AFF	7	10	77	15	3	1	2	-
INT	4.5	2.5	124	25	6	3	2	1
SUC	11	13	61	12	2	1	1	-
DOM	10	1	139	28	9	2	4	3
ABA	2.5	2.5	124	25	6	4	1	1
NUR	12.5	11	70	14	3	2	1	-
CHG	14	14	57	11	1	1	-	-
DUR**	1	8	100	20	4	3	1+	-
HET	4.5	7	101	20	2	-	2	-
AGG	12	9	79	16	1	1	1	-

Total: 1,370

*of 506 differences possible (22x23).

**ENDurance in manual.

+includes norm group

TABLE 6

DIFFERENCES BY SCALE (FEMALE)

Scale	Rank order of # of signif. differences. From Norm	Among All	Sig. diffs. Total	% *	Number of studies with 8 or more significant differences (01 per cent) and direction. Total	Higher	Lower	Both
ACH	9	11.5	32	18	2	-	1	1
DEF	3	2.5	48	26	5	3	1	1
ORD	5	2.5	48	26	4	1	1	2
EXH	11	9.5	35	19	2	-	-	2
AUT	15	14	28	15	1	-	1	-
AFF	2	7	40	22	2	-	-	2+
INT	11	9.5	35	19	4	1	2	1
SUC	11	11.5	32	18	2	-	-	2
DOM	7.5	8	39	21	1	-	1	-
ABA	1	1	59	32	13	3	5	5+
NUR	13.5	13	31	17	3	2	-	1
CHG	5	6	43	24	3	-	2	1
DUR	7.5	4	45	25	6	4	1	1
HET	5	5	44	24	6	1	5	-
AGG	13.5	15	21	12	0	-	-	-
			Total: 580					

*of 182 differences possible (14 x 13)

+includes norm group.

APPENDIX A

Male Groups

1. (Engineers) Gray, James T. "Needs and Values in Three Occupations." Personnel and Guidance Journal, 1963, 42, 238-244.

2. (Teachers) Ibid.

3. (Accountants) Ibid.

4. (College Counselees) Merrill, Reed M. and Louise B. Heathers. "The Relation of the MMPI to the Edwards Personal Preference Schedule on a College Counseling Center Sample." Journal of Consulting Psychology, 1936, 20, 310-314.

5. (Southern Negroes) Grossack, Martin M. "Some Personality Characteristics of Southern Negro Students." Journal of Social Psychology, 1957, 46, 125-131.

6. (College Men) Blum, Stuart H. "The Desire for Security: an Element in the Vocational Choice of College Men." Journal of Educational Psychology, 1961, 52, 317-321.

7. (High School Teachers) Jackson, Philip W. and Egon G. Guba. "The Need Structure of In-service Teachers, an Occupational Analysis." School Review, 1957, 65, 176-192.

8. (Elementary School Teachers) Ibid.

9. (Entering College Freshman) Tisdale, John R. "Comparison of Edwards Personal Preference Schedule Data for Three Groups." Psychological Record, 1965, 15 203-210.

10. (Psychiatric Patients) Gauron, E. F. "Changes in Edwards Personal Preference Schedule Needs with Age and Psychiatric Status." Journal of Clinical Psychology, 1965, 21, 194-196.

11. (Neuropsychiatric Sample) Newman, J. and G. J. Wischner. "The Performance of an Hospitalized Neuropsychiatric Sample on the Edwards Personal Preference Schedule." Journal of Clinical Psychology, 1960, 16, 99-100.

12. (College Sample) Satz, Paul and Robert M. Allen. "A Study of the EPPS: Regional Normative Approach." Journal of Social Psychology, 1961, 53, 195-198.

13. (Prison Inmates) Bernberg, Raymond E. "An Analysis of the Responses of a Male Prison Population to the Edwards Personal Preference Schedule." Journal of General Psychology, 1960, 62, 319-324.

14. (Education Students) Pietrofesa, J. J. "A Comparison of College Student Entering Different Academic Majors." Coral Gables, Florida: University of Miami, 1971. Doctoral Dissertation.

15. (Education Students) Wurtz, R. E. Entering Teacher Education Students; Selected Characteristics. Detroit: Wayne State University, 1969. Mimeo.

16. (Counselors) Asa, L. F. "Interview Behavior and Counselor Personality Variables." Counselor Education and Supervision, 1967, 6, 326-330.

17. (EPPS Norms) Edwards, A. L. Edwards Personal Preference Schedule. New York: Psychological Corporation, 1954.

18. (College Students) Allen, R. M. and J. I. Dallek. "A Normative Study of the Edward's Personal Preference Schedule." Journal of Psychology, 1957, 43, 151-154.

19. (High School Students) Klett, C. J. "Performance of High School Students on the Edwards Personal Preference Schedule." Journal of Consulting Psychology, 1957, 21, 68-72.

20. (Counselor Trainees) Pietrofesa, J. J. "Personality Needs of Counselor-Trainees." Detroit: Wayne State University, 1970. Mimeo.

21. (High School Students) Pietrofesa, J. J. "Personality Needs of High School Students." Miami Springs, Florida: Miami Springs High School, 1967. Mimeo.

22. (Law Students) Pietrofesa. "A Comparison..." Op. Cit.

23. (Medical Students) Ibid.

24. (Counselors) Roemnich, H. "The Need Structure of Public School Counselors." Journal of Educational Research, 1967, 61,24-26.

Female Groups

1. (Southern Negroes) Grossack. Op. Cit.

2. (High School Teachers) Jackson. Op. Cit.

3. (Elementary School Teachers) Ibid.

4. (Entering College Freshmen) Tisdale. Op. Cit.

5. (Neuropsychiatric Patients) Gauron. Op. Cit.

6. (College Students) Zuckerman, M. "The Validity of the EPPS in the Measurement of Dependency-Rebelliousness." Journal of Clinical Psychology, 1958, 14, 379-382.

7. (College Samples) Satz and Allen. Op. Cit.

8. (Education Students) Pietrofesa. "A Comparison..." Op. Cit.
9. (Education Students) Wurtz. Op. Cit.
10. (EPPS Norms) Edwards. Op. Cit.
11. (College Students) Allen and Dallek. Op. Cit.
12. (High School Students) Klett. Op. Cit.
13. (Counselors) Pietrofesa. "Counselor Trainees..." Op. Cit.
14. (High School Students) Pietrofesa. "High Student Needs: Op. Cit.
15. (Counselors) Roemnich. Op. Cit.